Message

From: Ohl, Matthew [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5BDE479F1AB54A9EBC9541A7D452C3B7-MOHL]
Sent: 6/9/2020 2:12:28 PM
To: Gary Wealthall [GWealthall@Geosyntec.com]
CC: Norman Bernstein [nwbernstein@nwbllc.com]; Peter Racher [pracher@psrb.com]; Douglas Petroff [DPetroff@idem.IN.gov]; Krueger, Thomas [krueger.thomas@epa.gov]; Andrew A Gremos [agremos@ramboll.com]; Mark Harkness [Mark.Harkness@ramboll.com]; Christopher Gale [CGale@Geosyntec.com]; Suzanne OHara [SOHara@Geosyntec.com]; Nichter, Mark W CIV USARMY CELRL (USA) [Mark.W.Nichter@usace.army.mil]; Douglas M LRL Buchanan - USACE (Douglas.M.Buchanan@usace.army.mil) [douglas.m.buchanan@usace.army.mil]; Becker, David J CIV USARMY CEHNC (USA) [Dave.J.Becker@usace.army.mil]
Subject: RE: Third Site - Authorization to Proceed with the DNAPL Containment Area Sampling Plan - Phase 2 as Modified by Comments:

Good morning Gary:

Thank you for your response. Your proposal regarding our first comment is acceptable.

Thank you,

Matt

Matthew J. Ohl
Remedial Project Manager
United States Environmental Protection Agency
77 West Jackson Boulevard, SR-6J
Chicago, IL 60604-3590

phone: 312.886.4442
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e-mail: ohl.matthew@epa.gov

From: Gary Wealthall <GWealthall@Geosyntec.com>
Sent: Friday, June 5, 2020 1:40 PM
To: Ohl, Matthew <ohl.matthew@epa.gov>
Cc: Norman Bernstein <nwbernstein@nwbllc.com>; Peter Racher <pracher@psrb.com>; Douglas Petroff <DPetroff@idem.IN.gov>; Krueger, Thomas <krueger.thomas@epa.gov>; Andrew A Gremos <agremos@ramboll.com>; Mark Harkness <Mark.Harkness@ramboll.com>; Christopher Gale <CGale@Geosyntec.com>; Suzanne OHara <SOHara@Geosyntec.com>
Subject: RE: Third Site - Authorization to Proceed with the DNAPL Containment Area Sampling Plan - Phase 2 as Modified by Comments:

Dear Matt

Thank you for your considered comments regarding the DNAPL Area Sampling Plan. Our response to your recommendations are presented below:

Comment 3) - The typographical error at the base of Page 4 will be resolved.

Comment 2) - We will implement your request to add two additional PSGS locations, which are intended to better define exceedances in the sheet pile contained cell.

Comment 1) – The recommendation to pull back the sonic casing presents a number of challenges:

i. The interface of the Lower Till and Upper Sand and Gravel ranges from 28 to 35 ft depth. Pulling the sonic casing back from 46 ft depth will expose 13 to 18 ft of the Lower Till immediately below the Upper Sand and Gravel contact. This exposed thickness of Upper Till will likely to lead to borehole instability, which would compromise the borehole in the depth range (40 to 46 ft) of the well screen zone, as sediment from the borehole wall will be pushed to depth as the sonic casing is re-drilled;

ii. Attempting to sample from a location just 0.5 to 1 ft below the Lower Till and Upper Sand and Gravel interface will not result in a representative sample of the poorly permeable Upper Till. Leakage around the Sonic casing over the 1 ft interval of the Upper Till will occur due to the proximity to the overlying permeable Upper Sand and Gravel; and

iii. Samples from approximately 37.5 ft depth were collected during the Phase I Hydrasleeve sampling. A sample from a location just 1 ft below the Lower Till and Upper Sand and Gravel interface, which preferentially draws water from the Upper Sand and Gravel, will be duplicative of the samples collected during Phase 1.

Furthermore, soil samples will be collected from the sonic cores at locations above and below the Lower Till and Upper Sand and Gravel contact, which will be analysed to provide groundwater information at this interface.

We respectfully request that you reconsider the request to collect additional samples using the method of pulling back the sonic casing to approximately 0.5 to 1.0 ft below the Lower Till and Upper Sand and Gravel interface.

Best regards
Gary

Dr Gary Wealthall, FGS
Senior Principal
Geosyntec Consultants, Ltd

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From: Ohl, Matthew <ohl.matthew@epa.gov>
Sent: 02 June 2020 19:39
To: Suzanne OHara <SOHara@Geosyntec.com>
Cc: Douglas Petroff <DPetroff@idem.IN.gov>; Krueger, Thomas <krueger.thomas@epa.gov>; Andrew A Gremos <agremos@ramboll.com>; Christopher Gale <CGale@Geosyntec.com>; Gary Wealthall <GWealthall@Geosyntec.com>; Mark Harkness <Mark.Harkness@ramboll.com>; Norman Bernstein <nwbernstein@nwbllc.com>; Peter Racher <pracher@psrb.com>
Subject: Third Site - Authorization to Proceed with the DNAPL Containment Area Sampling Plan - Phase 2 as Modified by Comments:

Good afternoon Suzanne:

EPA and IDEM have reviewed the DNAPL Area Sampling Plan and supplemental information related to the plan. As we continue to work through the issues related to further treatment, we hereby give authorization to proceed with the work as modified by the following comments:

1) Revise Section 3.1. Before pulling back the outer sonic casing to 40 feet and collecting a groundwater sample from 40-46 feet, pull the outer casing back to approximately 0.5 to 1.0 feet below the sand/lower till contact and collect a groundwater sample from this interval.

2) Revise Sections 3.1, 3.2, and Figure 2. Include two additional PSGS locations (PSGS-14 and PSGS-15) in the work plan. Advance PSGS-14 at a location north of extraction well X-D3, to better verify the northern extent of the exceedances of the target concentrations in this area. Upon completion of PSGS-1 through PSGS-14, advance PSGS-15 at a currently unspecified location that offsets an area found to exhibit greater potential for elevated contaminants. PSGS-15 can be used to better define the extent of any exceedances identified at locations PSGS-1 through PSGS-14.

3) Correct the placement of the footer that covers the text, "pore spaces) the borehole will be" on the bottom of page 4.

Thank you,

Matt

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From: Suzanne OHara <SOHara@Geosyntec.com>
Sent: Friday, May 22, 2020 1:16 PM
To: Ohl, Matthew <ohl.matthew@epa.gov>
Cc: pracher@psrb.com; Douglas Petroff <DPetroff@idem.in.gov>; Mark Nichter <Mark.W.Nichter@usace.army.mil>; Krueger, Thomas <krueger.thomas@epa.gov>; Douglas Buchanan <Douglas.M.Buchanan@usace.army.mil>; Becker, David J CIV USARMY CEHNC (US) <Dave.J.Becker@usace.army.mil>; Andrew A Gremos <agremos@ramboll.com>; Christopher Gale <CGale@Geosyntec.com>; Gary Wealthall <GWealthall@Geosyntec.com>; Mark Harkness <Mark.Harkness@ramboll.com>; Norman Bernstein <nwbernstein@nwbllc.com>
Subject: RE: Third Site - DNAPL Containment Area Sampling Plan - Phase 2

Matt

You have requested a set of figures showing the distribution of compounds in groundwater at the Site that have boiling points above 100 °C. However, these compounds are no longer the pure chemical and are mixed with groundwater in the subsurface. The heterogeneous azeotrope is the temperature at which compounds mixed with water will begin to co-boil. As a result of Raoult's Law, the vapor pressures of the two components are additive, such that they co-boil at a temperature below the boiling points of each of the pure substances. Once the temperature has risen past the heterogeneous azeotrope, DNAPL can no longer exist as a separate phase. The attached table presents the heterogeneous azeotropes of the compounds detected in the groundwater at the Third Site. As can be seen from the table, azeotropes for VOCs at the site are all below 100 °C.

Based on the azeotrope analysis there are no compounds in the sheet pile enclosed DNAPL area with a co-boiling point above 100 °C.

Regards,

Suzanne

Suzanne O'Hara. MSc., P.Geo. (ON), P.G. (NY)
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From: Norman Bernstein <nwbernstein@nwbllc.com>
Sent: Thursday, May 21, 2020 3:06 PM
To: Ohl, Matthew <ohl.matthew@epa.gov>
Cc: Suzanne OHara <SOHara@Geosyntec.com>; pracher@psrb.com; Douglas Petroff <DPetroff@idem.in.gov>; Mark Nichter <Mark.W.Nichter@usace.army.mil>; Krueger, Thomas <krueger.thomas@epa.gov>; Mary Desmond <mdesmond@nwbllc.com>; Douglas Buchanan <Douglas.M.Buchanan@usace.army.mil>; Becker, David J CIV USARMY CEHNC (US) <Dave.J.Becker@usace.army.mil>; Andrew A Gremos <agremos@ramboll.com>; Christopher Gale <CGale@Geosyntec.com>; Gary Wealthall <GWealthall@Geosyntec.com>
Subject: Re: Third Site - DNAPL Containment Area Sampling Plan - Phase 2

Matt

Suzanne has not been available to respond to your email of yesterday. We will supply the information requested.

Norm

On Wed, May 20, 2020 at 8:53 AM Ohl, Matthew <ohl.matthew@epa.gov> wrote:

> Suzanne:
>
> Thank you for the sampling plan for phase 2. To assist in our review, please provide drawings showing the distribution of any constituents with a boiling point above 100 degrees Centigrade across the Third Site monitoring well network and within the DNAPL area.
>
> Thank you,

Matt

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From: Suzanne OHara <SOHara@Geosyntec.com>
Sent: Friday, May 15, 2020 4:29 PM
To: Ohl, Matthew <ohl.matthew@epa.gov>
Cc: nwbernstein@nwbllc.com; pracher@psrb.com; Douglas Petroff <DPetroff@idem.IN.gov>; Mark Nichter <Mark.W.Nichter@usace.army.mil>; Krueger, Thomas <krueger.thomas@epa.gov>; Mary Desmond <mdesmond@nwbllc.com>; Douglas Buchanan <Douglas.M.Buchanan@usace.army.mil>; Becker, David J CIV USARMY CEHNC (US) <Dave.J.Becker@usace.army.mil>; Andrew A Gremos <agremos@ramboll.com>; Christopher Gale <CGale@Geosyntec.com>; Gary Wealthall <GWealthall@Geosyntec.com>
Subject: Third Site - DNAPL Containment Area Sampling Plan - Phase 2

Matt

Please find attached the Phase II DNAP Area Supplemental Sampling Plan which presents the results of the groundwater sampling conducted in Phase I and the plan for Phase II with the proposed soil and deep groundwater sampling locations.

Please let us know if you have any questions or comments on the attached.

Regards,

Suzanne

Suzanne O'Hara. MSc., P.Geo. (ON), P.G. (NY)

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